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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,443	07/12/2001	Tsuyoshi Mekata	5077-000059	3751

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EXAMINER

HANNAHER, CONSTANTINE

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/889,443	Applicant(s) MEKATA ET AL.
	Examiner Constantine Hannaher	Art Unit 2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 July 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 3-18 is/are pending in the application.
 - 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,5 and 7 is/are rejected.
- 7) Claim(s) 3,4,6 and 8 is/are objected to.
- 8) Claim(s) 1 and 3-18 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 July 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5,6</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1 and 3-8, drawn to an infrared imaging device with correction means.

Group II, claim(s) 9-12, drawn to an infrared imaging device with control means.

Group III, claim(s) 13-16, drawn to an infrared imaging device with a temperature stabilizing retaining structure.

Group IV, claim(s) 17 and 18, drawn to an infrared imaging device with vehicle part as calibration.

2. The inventions listed as Groups I, II, III, and IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical features as identified in the listing of groups above are not the same, nor do they correspond.

3. During a telephone conversation with the office of Gregory A. Stobbs (Reg. No. 27,572) on April 11, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 and 3-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any

amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

National Stage Application

5. The Examiner acknowledges consideration of the International Preliminary Examination Report in International Application PCT/JP00/00116. MPEP § 1893.03(e).

Drawings

6. Figs. 8, 9, 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities: on page 3, "A" has presumably been used as a substitute for --Δ--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the

contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchimoto *et al.* (US005994701A) and Butler (US006274869B1).

With respect to independent claim 1, Tsuchimoto *et al.* discloses an infrared imaging device (Figs. 1 and 2) comprising an infrared detector 6, an optical system 1b for causing an infrared radiation from an object to form an image on the infrared detector, shutting means 3 configured so that the shutting means can be opened (Fig. 1) and closed (Fig. 2) and so as to shut off an infrared radiation coming into the optical system 1b (from object 20) when the shutting means is closed, and correction means (Figs. 3 and 4) for correcting an output of the infrared detector 6. While the shutting means 3 in the infrared imaging device of Tsuchimoto *et al.* is closed, an output 106 of the infrared detector 6 imaging the shutting means is used to determine a correction coefficient for correcting fluctuations in an amount of infrared radiation from the optical system (column 11, line 49). From Butler it is apparent that when a shutting means 330 (Fig. 1) is closed the output of an infrared detector 100 imaging the shutting means while the shutting means is closed is used to determine a correction coefficient for correcting variations in DC offset in view of the operation of offset controller 302 (see also Fig. 7 and column 10, lines 56-65). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the correction means of Tsuchimoto *et al.* to also determine a coefficient for correcting variations in a DC offset from the output of the infrared detector 6 imaging the shutting means 3 while the shutting means is closed in view of the improved image display. Butler also shows a correction

coefficient proportional to a sensitivity of each pixel of the infrared detector in gain memory 338.

Accordingly, since a correction for sensitivity is well-known and useful for improving the image display as suggested by Butler, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the correction means of Tsuchimoto *et al.* to also use a correction coefficient proportional to a sensitivity of each pixel of the infrared detector 6.

With respect to dependent claim 5, the infrared imaging device of Tsuchimoto *et al.* comprises temperature measurement means 5 for measuring a surface temperature of the shutting means 3 (column 8, lines 49-54). The correction means determines the correction coefficient by using a temperature measured by the temperature measurement means (column 8, line 49 to column 9, line 39).

With respect to dependent claim 7, the shutting means 3 of Tsuchimoto *et al.* is a flat-plate member (shutter) having a uniform temperature distribution (since its emission can be calculated from a temperature measurement at a single location).

Response to Submission(s)

11. The amendment filed July 12, 2001 has been entered.

Allowable Subject Matter

12. Claims 3, 4, 6, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: the references do not suggest in combination with the recited elements two shutting means, temperature setting means, or a non-focused state.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (703) 308-4850. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (703) 308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ch
April 28, 2003


Constantine Hannaher
Primary Examiner